had lately shared in a religious excursion to Wandipore. Cattle are not frequent. There were some pigs. The fowls were of the most miserable description, and very scarce. In spite of offers of purchase and plenty of promises, we were throughout allowed three a day, and they were rather smaller than pigeons. Towards the latter end of our stay rice became bad and scarce. There are a great number of Assamese slaves about Punukka: indeed, all the agricultural work, as well as that of beasts of burden, appears to devolve upon these unfortunate creatures, who are miserably provided for, and perhaps dirtier than a genuine Bootea himself. On the 9th May at noon we left Punukka, the most uninviting place I have ever seen in a hilly country. On the morning of the same day there was a demonstration in the palace of great boldness; the roof of the northern side was covered with troops, who shouted, fired, and waved banners. We crossed both bridges of the palace without any interruption or annoyance, at which I was most agreeably surprised; and then gradually ascended the right flank of the valley, following the course of the united rivers, Patchien and Matchien. We proceeded in this direction for some time, until we came on a ravine affording an outlet to a tributary of the Punukka river, which we then followed, gradually descending through fir woods until we reached the torrent. Crossing this, which is a small one, we commenced the ascent to Telagong, which we soon reached.

[To be continued.]

BIBLIOGRAPHICAL NOTICES.

A Report on the Progress of Vegetable Physiology during the year 1837. By F. J. F. Meyen, M.D., Professor of Botany in the University of Berlin. Translated from the German, by William Francis, A.L.S. London, 1839. 8vo. pp. 158.

To those who are interested in the cultivation of science it might appear superfluous to recommend such a work as this; and yet the delay in its appearance, caused by the want of a sufficient number of subscribers at its very moderate price to cover the mere expenses of publication, seems to indicate that it is not sufficiently known or appreciated. No one can now assume any elevated position in botanical science who is not conversant with the structure and physiology of plants, as well as with their external forms and aspects. The time when the acquirements of a naturalist were measured by the number of species he had collected is now, we trust, gone by for ever, and *names* and *classifications* are looked upon by the man of

had lately shared in a religious excursion to Wandipore. Cattle are not frequent. There were some pigs. The fowls were of the most miserable description, and very scarce. In spite of offers of purchase and plenty of promises, we were throughout allowed three a day, and they were rather smaller than pigeons. Towards the latter end of our stay rice became bad and scarce. There are a great number of Assamese slaves about Punukka: indeed, all the agricultural work, as well as that of beasts of burden, appears to devolve upon these unfortunate creatures, who are miserably provided for, and perhaps dirtier than a genuine Bootea himself. On the 9th May at noon we left Punukka, the most uninviting place I have ever seen in a hilly country. On the morning of the same day there was a demonstration in the palace of great boldness; the roof of the northern side was covered with troops, who shouted, fired, and waved banners. We crossed both bridges of the palace without any interruption or annoyance, at which I was most agreeably surprised; and then gradually ascended the right flank of the valley, following the course of the united rivers, Patchien and Matchien. We proceeded in this direction for some time, until we came on a ravine affording an outlet to a tributary of the Punukka river, which we then followed, gradually descending through fir woods until we reached the torrent. Crossing this, which is a small one, we commenced the ascent to Telagong, which we soon reached.

[To be continued.]

BIBLIOGRAPHICAL NOTICES.

A Report on the Progress of Vegetable Physiology during the year 1837. By F. J. F. Meyen, M.D., Professor of Botany in the University of Berlin. Translated from the German, by William Francis, A.L.S. London, 1839. 8vo. pp. 158.

To those who are interested in the cultivation of science it might appear superfluous to recommend such a work as this; and yet the delay in its appearance, caused by the want of a sufficient number of subscribers at its very moderate price to cover the mere expenses of publication, seems to indicate that it is not sufficiently known or appreciated. No one can now assume any elevated position in botanical science who is not conversant with the structure and physiology of plants, as well as with their external forms and aspects. The time when the acquirements of a naturalist were measured by the number of species he had collected is now, we trust, gone by for ever, and *names* and *classifications* are looked upon by the man of

had lately shared in a religious excursion to Wandipore. Cattle are not frequent. There were some pigs. The fowls were of the most miserable description, and very scarce. In spite of offers of purchase and plenty of promises, we were throughout allowed three a day, and they were rather smaller than pigeons. Towards the latter end of our stay rice became bad and scarce. There are a great number of Assamese slaves about Punukka: indeed, all the agricultural work, as well as that of beasts of burden, appears to devolve upon these unfortunate creatures, who are miserably provided for, and perhaps dirtier than a genuine Bootea himself. On the 9th May at noon we left Punukka, the most uninviting place I have ever seen in a hilly country. On the morning of the same day there was a demonstration in the palace of great boldness; the roof of the northern side was covered with troops, who shouted, fired, and waved banners. We crossed both bridges of the palace without any interruption or annoyance, at which I was most agreeably surprised; and then gradually ascended the right flank of the valley, following the course of the united rivers, Patchien and Matchien. We proceeded in this direction for some time, until we came on a ravine affording an outlet to a tributary of the Punukka river, which we then followed, gradually descending through fir woods until we reached the torrent. Crossing this, which is a small one, we commenced the ascent to Telagong, which we soon reached.

[To be continued.]

BIBLIOGRAPHICAL NOTICES.

A Report on the Progress of Vegetable Physiology during the year 1837. By F. J. F. Meyen, M.D., Professor of Botany in the University of Berlin. Translated from the German, by William Francis, A.L.S. London, 1839. 8vo. pp. 158.

To those who are interested in the cultivation of science it might appear superfluous to recommend such a work as this; and yet the delay in its appearance, caused by the want of a sufficient number of subscribers at its very moderate price to cover the mere expenses of publication, seems to indicate that it is not sufficiently known or appreciated. No one can now assume any elevated position in botanical science who is not conversant with the structure and physiology of plants, as well as with their external forms and aspects. The time when the acquirements of a naturalist were measured by the number of species he had collected is now, we trust, gone by for ever, and *names* and *classifications* are looked upon by the man of

enlightened views as but the *mechanism* by which the true principles of science are to be worked out. Although Britain can boast of possessing some among the foremost in the rank of philosophical botanists, and of having contributed her full share of the most important discoveries of recent times, she must be content to remain far behind in regard to general knowledge of the science as long as the prevailing ignorance of its progress abroad shall continue to exist. To this our insular situation in part contributes; and it is partly due to the small amount of attention paid to natural history as a branch of general education. On both these points, however, we look for rapid improvement. Rail-roads and steam-boats will have an important influence on the progress of science as well as on the extension of commerce. The period is surely now commencing when "many shall run to and fro, and knowledge shall be increased." And in regard to education, we see many indications of an important change. There is a growing feeling amongst those who are engaged in it that the minds of the young may be trained with advantage to observe and reason upon the wondrous phænomena of the universe;—that to neglect the pages in which the *works* of the Creator are displayed to us is an error comparable with that of neglecting his *word*;—and that, for the object of intellectual discipline, the study of *things* may often be substituted for that of *words*, with the double advantage of interesting the pupil, and of giving him a store of knowledge which will be subsequently valuable. To this revolutionary innovation upon the old system the University of London has given its sanction, by requiring from candidates for its degree in Arts a knowledge not only of classics and mathematics, but of natural philosophy, chemistry, natural history, and physiology. In this we see much that augurs well for the progress of science in England. The youthful mind is much more apt in the acquirement of elementary knowledge than the adult, whose observing powers have been allowed to lie dormant at the time of their greatest activity; and, if a good foundation be early laid, we have no fear of a deficiency of motives for subsequent labour.

We have always regarded the study of Vegetable Physiology as the department of natural history best adapted to engage the attention of the young, from the facilities which offer themselves to its pursuit, and its freedom from those drawbacks so common in other branches. Its objects are never out of reach; for barren indeed must be that country which affords no shelter to the products of the vegetable kingdom. The meanest and most common herbs are in the eye of the physiologist as interesting as the majestic tree or the

enlightened views as but the *mechanism* by which the true principles of science are to be worked out. Although Britain can boast of possessing some among the foremost in the rank of philosophical botanists, and of having contributed her full share of the most important discoveries of recent times, she must be content to remain far behind in regard to general knowledge of the science as long as the prevailing ignorance of its progress abroad shall continue to exist. To this our insular situation in part contributes; and it is partly due to the small amount of attention paid to natural history as a branch of general education. On both these points, however, we look for rapid improvement. Rail-roads and steam-boats will have an important influence on the progress of science as well as on the extension of commerce. The period is surely now commencing when "many shall run to and fro, and knowledge shall be increased." And in regard to education, we see many indications of an important change. There is a growing feeling amongst those who are engaged in it that the minds of the young may be trained with advantage to observe and reason upon the wondrous phænomena of the universe;—that to neglect the pages in which the *works* of the Creator are displayed to us is an error comparable with that of neglecting his *word*;—and that, for the object of intellectual discipline, the study of *things* may often be substituted for that of *words*, with the double advantage of interesting the pupil, and of giving him a store of knowledge which will be subsequently valuable. To this revolutionary innovation upon the old system the University of London has given its sanction, by requiring from candidates for its degree in Arts a knowledge not only of classics and mathematics, but of natural philosophy, chemistry, natural history, and physiology. In this we see much that augurs well for the progress of science in England. The youthful mind is much more apt in the acquirement of elementary knowledge than the adult, whose observing powers have been allowed to lie dormant at the time of their greatest activity; and, if a good foundation be early laid, we have no fear of a deficiency of motives for subsequent labour.

We have always regarded the study of Vegetable Physiology as the department of natural history best adapted to engage the attention of the young, from the facilities which offer themselves to its pursuit, and its freedom from those drawbacks so common in other branches. Its objects are never out of reach; for barren indeed must be that country which affords no shelter to the products of the vegetable kingdom. The meanest and most common herbs are in the eye of the physiologist as interesting as the majestic tree or the

enlightened views as but the *mechanism* by which the true principles of science are to be worked out. Although Britain can boast of possessing some among the foremost in the rank of philosophical botanists, and of having contributed her full share of the most important discoveries of recent times, she must be content to remain far behind in regard to general knowledge of the science as long as the prevailing ignorance of its progress abroad shall continue to exist. To this our insular situation in part contributes; and it is partly due to the small amount of attention paid to natural history as a branch of general education. On both these points, however, we look for rapid improvement. Rail-roads and steam-boats will have an important influence on the progress of science as well as on the extension of commerce. The period is surely now commencing when "many shall run to and fro, and knowledge shall be increased." And in regard to education, we see many indications of an important change. There is a growing feeling amongst those who are engaged in it that the minds of the young may be trained with advantage to observe and reason upon the wondrous phænomena of the universe;—that to neglect the pages in which the *works* of the Creator are displayed to us is an error comparable with that of neglecting his *word*;—and that, for the object of intellectual discipline, the study of *things* may often be substituted for that of *words*, with the double advantage of interesting the pupil, and of giving him a store of knowledge which will be subsequently valuable. To this revolutionary innovation upon the old system the University of London has given its sanction, by requiring from candidates for its degree in Arts a knowledge not only of classics and mathematics, but of natural philosophy, chemistry, natural history, and physiology. In this we see much that augurs well for the progress of science in England. The youthful mind is much more apt in the acquirement of elementary knowledge than the adult, whose observing powers have been allowed to lie dormant at the time of their greatest activity; and, if a good foundation be early laid, we have no fear of a deficiency of motives for subsequent labour.

We have always regarded the study of Vegetable Physiology as the department of natural history best adapted to engage the attention of the young, from the facilities which offer themselves to its pursuit, and its freedom from those drawbacks so common in other branches. Its objects are never out of reach; for barren indeed must be that country which affords no shelter to the products of the vegetable kingdom. The meanest and most common herbs are in the eye of the physiologist as interesting as the majestic tree or the

rarest flower;—witness the important results obtained by Mirbel from the study of the *Marchantia polymorpha*. The toilsome labours of the collector are not required here, nor is the mind fatigued by the difficulties and technicalities of classification; and what renders the pursuit of this science especially adapted to the female sex is its freedom from the necessity of that corporeal suffering, which, however laudable its ultimate object, the truly humane mind will always dread to inflict upon its sentient fellow-beings.

There is another class upon which we would urge the necessity of attention to Vegetable Physiology—the students of medicine. Those who are sufficiently enlightened to perceive that a knowledge of the actions of the human body in health is the best preparation they can have for the study of its diseased conditions, will find it much to their advantage to have gained an early acquaintance with the vital phænomena exhibited by plants, which often exhibit changes whose conditions are obscure in animals, in a magnified form as it were, and in circumstances which allow them to be more easily studied. We especially refer to those concerned in reproduction and in the act of organization, on which new and important contributions have been recently made to vegetable physiology, that have led to equally successful researches into the corresponding mysteries of animal life. No one, it seems to us, can now be esteemed a scientific physiologist who does not embrace in the scope of his inquiries all classes of animated beings, and the more extended his basis the more certain and comprehensive will be his generalizations.

Periodical reports of the progress of any special department of science are, if well executed, among the most valuable additions to its literature, and this is particularly the case when the number of its cultivators is great, so that their contributions are spread over a wide surface. There is perhaps no science which stands more in need of such comprehensive sketches than Vegetable Physiology, and no individual who could execute them with more success than Prof. Meyen. Of the mass of information brought together in the Report before us, a great part would never have reached this country if it had not been thus embodied; and if it be thought that he has manifested less acquaintance with the progress of science in England than with the labours of German physiologists, it will be remembered that the fullness with which the latter are presented should make it peculiarly acceptable to the English reader, who may be supposed to be acquainted with the labours of his countrymen. The translation is very ably executed, and presents the ideas of the author with greater force and precision than most of our readers would

rarest flower;—witness the important results obtained by Mirbel from the study of the *Marchantia polymorpha*. The toilsome labours of the collector are not required here, nor is the mind fatigued by the difficulties and technicalities of classification; and what renders the pursuit of this science especially adapted to the female sex is its freedom from the necessity of that corporeal suffering, which, however laudable its ultimate object, the truly humane mind will always dread to inflict upon its sentient fellow-beings.

There is another class upon which we would urge the necessity of attention to Vegetable Physiology—the students of medicine. Those who are sufficiently enlightened to perceive that a knowledge of the actions of the human body in health is the best preparation they can have for the study of its diseased conditions, will find it much to their advantage to have gained an early acquaintance with the vital phænomena exhibited by plants, which often exhibit changes whose conditions are obscure in animals, in a magnified form as it were, and in circumstances which allow them to be more easily studied. We especially refer to those concerned in reproduction and in the act of organization, on which new and important contributions have been recently made to vegetable physiology, that have led to equally successful researches into the corresponding mysteries of animal life. No one, it seems to us, can now be esteemed a scientific physiologist who does not embrace in the scope of his inquiries all classes of animated beings, and the more extended his basis the more certain and comprehensive will be his generalizations.

Periodical reports of the progress of any special department of science are, if well executed, among the most valuable additions to its literature, and this is particularly the case when the number of its cultivators is great, so that their contributions are spread over a wide surface. There is perhaps no science which stands more in need of such comprehensive sketches than Vegetable Physiology, and no individual who could execute them with more success than Prof. Meyen. Of the mass of information brought together in the Report before us, a great part would never have reached this country if it had not been thus embodied; and if it be thought that he has manifested less acquaintance with the progress of science in England than with the labours of German physiologists, it will be remembered that the fullness with which the latter are presented should make it peculiarly acceptable to the English reader, who may be supposed to be acquainted with the labours of his countrymen. The translation is very ably executed, and presents the ideas of the author with greater force and precision than most of our readers would

rarest flower;—witness the important results obtained by Mirbel from the study of the *Marchantia polymorpha*. The toilsome labours of the collector are not required here, nor is the mind fatigued by the difficulties and technicalities of classification; and what renders the pursuit of this science especially adapted to the female sex is its freedom from the necessity of that corporeal suffering, which, however laudable its ultimate object, the truly humane mind will always dread to inflict upon its sentient fellow-beings.

There is another class upon which we would urge the necessity of attention to Vegetable Physiology—the students of medicine. Those who are sufficiently enlightened to perceive that a knowledge of the actions of the human body in health is the best preparation they can have for the study of its diseased conditions, will find it much to their advantage to have gained an early acquaintance with the vital phænomena exhibited by plants, which often exhibit changes whose conditions are obscure in animals, in a magnified form as it were, and in circumstances which allow them to be more easily studied. We especially refer to those concerned in reproduction and in the act of organization, on which new and important contributions have been recently made to vegetable physiology, that have led to equally successful researches into the corresponding mysteries of animal life. No one, it seems to us, can now be esteemed a scientific physiologist who does not embrace in the scope of his inquiries all classes of animated beings, and the more extended his basis the more certain and comprehensive will be his generalizations.

Periodical reports of the progress of any special department of science are, if well executed, among the most valuable additions to its literature, and this is particularly the case when the number of its cultivators is great, so that their contributions are spread over a wide surface. There is perhaps no science which stands more in need of such comprehensive sketches than Vegetable Physiology, and no individual who could execute them with more success than Prof. Meyen. Of the mass of information brought together in the Report before us, a great part would never have reached this country if it had not been thus embodied; and if it be thought that he has manifested less acquaintance with the progress of science in England than with the labours of German physiologists, it will be remembered that the fullness with which the latter are presented should make it peculiarly acceptable to the English reader, who may be supposed to be acquainted with the labours of his countrymen. The translation is very ably executed, and presents the ideas of the author with greater force and precision than most of our readers would

be likely to attain by their own perusal of the original; since it requires considerable familiarity with the German language to be able to render with accuracy the nicer shades of meaning which are often adopted from colloquialisms into scientific language. We would strongly urge upon our scientific friends therefore to encourage the continued translation of these valuable reports by aiding in the sale of the part before us. We feel confident that they will progressively increase in interest as the science advances towards perfection, and will afford a valuable and interesting record of its progress. To those who desire to be *au courant* with the present state of knowledge an acquaintance with them is indispensable.

A List of the Genera of Birds, with an indication of the Typical Species of each Genus. By George Robert Gray, Ornithological Assistant Zool. Departm. British Museum, &c., &c. 8vo. London, 1840.

This work, as its title indicates, contains a complete enumeration of the genera of birds, disposed according to a system "based on the arrangements of M. Cuvier and Mr. Vigors, with such improvements as in the author's view of the subject could be gleaned from those of Mr. Swainson and others." The number of genera enumerated, not including those names which are regarded as merely synonymous, amounts to 1065; but Mr. G. Gray avows his opinion that his List "contains some genera established upon characters too trivial to admit of their being definitively adopted." He states it indeed to have been his object, in the present publication, rather to give "a correct view of all the genera that have been proposed" than "closely to criticize the value of the subdivisions employed." We trust, however, that the latter more important task will be undertaken by him in a more extended work, in which the preface gives us reason to believe that he has long been engaged, viz. a "Genera of Birds," accompanied with their characters.

In the mean time the work before us may be regarded as a useful outline of the present state of Systematic Ornithology, comprehending a much more complete enumeration of genera than any that has preceded it; evincing great care in determining the priority of names, and showing due respect for that universal law (so recklessly infringed by many ornithologists) which scrupulously assigns the preference to prior publication. Under each genus are added the synonyms, or those names which have been employed to designate species of the group; one species is cited as an example, a figure being referred to whenever it exists; and occasional rectifications of syno-

be likely to attain by their own perusal of the original; since it requires considerable familiarity with the German language to be able to render with accuracy the nicer shades of meaning which are often adopted from colloquialisms into scientific language. We would strongly urge upon our scientific friends therefore to encourage the continued translation of these valuable reports by aiding in the sale of the part before us. We feel confident that they will progressively increase in interest as the science advances towards perfection, and will afford a valuable and interesting record of its progress. To those who desire to be *au courant* with the present state of knowledge an acquaintance with them is indispensable.

A List of the Genera of Birds, with an indication of the Typical Species of each Genus. By George Robert Gray, Ornithological Assistant Zool. Departm. British Museum, &c., &c. 8vo. London, 1840.

This work, as its title indicates, contains a complete enumeration of the genera of birds, disposed according to a system "based on the arrangements of M. Cuvier and Mr. Vigors, with such improvements as in the author's view of the subject could be gleaned from those of Mr. Swainson and others." The number of genera enumerated, not including those names which are regarded as merely synonymous, amounts to 1065; but Mr. G. Gray avows his opinion that his List "contains some genera established upon characters too trivial to admit of their being definitively adopted." He states it indeed to have been his object, in the present publication, rather to give "a correct view of all the genera that have been proposed" than "closely to criticize the value of the subdivisions employed." We trust, however, that the latter more important task will be undertaken by him in a more extended work, in which the preface gives us reason to believe that he has long been engaged, viz. a "Genera of Birds," accompanied with their characters.

In the mean time the work before us may be regarded as a useful outline of the present state of Systematic Ornithology, comprehending a much more complete enumeration of genera than any that has preceded it; evincing great care in determining the priority of names, and showing due respect for that universal law (so recklessly infringed by many ornithologists) which scrupulously assigns the preference to prior publication. Under each genus are added the synonyms, or those names which have been employed to designate species of the group; one species is cited as an example, a figure being referred to whenever it exists; and occasional rectifications of syno-

be likely to attain by their own perusal of the original; since it requires considerable familiarity with the German language to be able to render with accuracy the nicer shades of meaning which are often adopted from colloquialisms into scientific language. We would strongly urge upon our scientific friends therefore to encourage the continued translation of these valuable reports by aiding in the sale of the part before us. We feel confident that they will progressively increase in interest as the science advances towards perfection, and will afford a valuable and interesting record of its progress. To those who desire to be *au courant* with the present state of knowledge an acquaintance with them is indispensable.

A List of the Genera of Birds, with an indication of the Typical Species of each Genus. By George Robert Gray, Ornithological Assistant Zool. Departm. British Museum, &c., &c. 8vo. London, 1840.

This work, as its title indicates, contains a complete enumeration of the genera of birds, disposed according to a system "based on the arrangements of M. Cuvier and Mr. Vigors, with such improvements as in the author's view of the subject could be gleaned from those of Mr. Swainson and others." The number of genera enumerated, not including those names which are regarded as merely synonymous, amounts to 1065; but Mr. G. Gray avows his opinion that his List "contains some genera established upon characters too trivial to admit of their being definitively adopted." He states it indeed to have been his object, in the present publication, rather to give "a correct view of all the genera that have been proposed" than "closely to criticize the value of the subdivisions employed." We trust, however, that the latter more important task will be undertaken by him in a more extended work, in which the preface gives us reason to believe that he has long been engaged, viz. a "Genera of Birds," accompanied with their characters.

In the mean time the work before us may be regarded as a useful outline of the present state of Systematic Ornithology, comprehending a much more complete enumeration of genera than any that has preceded it; evincing great care in determining the priority of names, and showing due respect for that universal law (so recklessly infringed by many ornithologists) which scrupulously assigns the preference to prior publication. Under each genus are added the synonyms, or those names which have been employed to designate species of the group; one species is cited as an example, a figure being referred to whenever it exists; and occasional rectifications of syno-